UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,816	02/05/2004	Aaron J. Barber	BCS03472	5955

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EXAMINER
FEATHERSTONE, MARK D

ART UNIT	PAPER NUMBER
4157	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/772,816	BARBER ET AL.
	Examiner	Art Unit	
	Mark D. Featherstone	4157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>05 February 2004</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-25</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-25</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>02/05/2004</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

>   (a) the invention was known or used by others in this country, or patented or described in a printed
>   publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
>   (b) the invention was patented or described in a printed publication in this or a foreign country or in public
>   use or on sale in this country, more than one year prior to the date of application for patent in the United
>   States.
>
>   (e) the invention was described in-
>   (1) an application for patent, published under section 122(b), by another filed in the United States before the
>   invention by the applicant for patent; or (2) a patent granted on an application for patent by another filed in
>   the United States before the invention by the applicant for patent, _except_ that an international application
>   filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of
>   an application filed in the United States only if the international application designated the United States and
>   was published under Article 21(2) of such treaty in the English.

2.   Claims 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Look

et al, US Patent # 6757906 B1 (hereinafter "Look").

> With regard to Claim 18, Look discloses:
>
> **An interface field programmable gate array (FPGA) configured to interface**
>
> **with a consumer premise component (CPC);** (column 8, line 29-30)
>
> **a signal decoder, wherein said signal decoder is configured to increase a**
>
> **signal decoding capability of said CPC** (column 5, line 49-52 –Look uses the
>
> language "separate decoders" here to mean a piece of hardware separate from
>
> the receiver device).

With regard to Claim 19, Look discloses:

The upgrade decoder of claim 18, wherein said upgrade decoder is

configured to be removably coupled to said CPC (Figure 2, and column 5,

lines 35-43 – Look discloses here the use of "multiple decoders" and "multiple

input sections").

With regard to Claim 20, Look discloses:

The upgrade decoder of claim 18, wherein said signal decoder comprises

one of a Moving Picture Experts Group-4 (MPEG-4) data stream decoder or

a Windows Media 9 (WM9) data stream decoder (Column 5, Line 49-51 - Look

specifically mentions "MPEG" here, but it is well known in the art that MPEG4

and WM9 fall into the same category of audio/visual data).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

> The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148
> USPQ 459 (1966)**, that are applied for establishing a background for determining
> obviousness under 35 U.S.C. 103(a) are summarized as follows: *(See MPEP Ch.
> 2141)*

>   a. Determining the scope and contents of the prior art;
>   b. Ascertaining the differences between the prior art and the claims in issue;

      c. Resolving the level of ordinary skill in the pertinent art; and

      d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

4.   Claims 1-7 rejected under 35 U.S.C. 103(a) as being unpatentable over "Wingard et al – US PG PUB #2003/0041104" in view of "Bacon et al – US PGPUB # 2003/0140237".

With regard to Claim 1, Wingard discloses:

A method comprising:

Communicatively coupling a removable upgrade decoder to a consumer premise component (CPC), said upgrade decoder being configured to decode a data stream (Paragraph 0060).

Wingard does not disclose the step of **downloading a computer code to the CPC, said code enabling said CPC to access said upgrade decoder.**

Bacon discloses this step, explaining that upon instruction, the boot program changes the code to deal with the alternate data format (abstract).

Given the two references, a person of ordinary skill in the art would find it obvious to combine the two in order to determine if the additional decoder is needed. It would have been obvious that the step of running program code in the CPC, as Bacon discloses, is necessary in order to invoke the decoder.

With regard to Claim 2, Wingard in view of Bacon, discloses:

The method of claim 1 (see Claim 1 rejection above)

**wherein the data stream comprises of a Moving Picture Experts Group-4
(MPEG-4) data stream** (Wingard, Paragraph 0060). Wingard does not
specifically disclose the decoding of a **Windows media (WM9) data**, however,
Wingard suggests a generic decoder "such as an MPEG decoder, that decodes
video, application, and/or audio). It is well known in the art that Windows Media
data falls into this category, therefore, it would have been obvious to one of
ordinary skill in the art at the time of invention to include the capability to decode
WM9 in the method in order to increase the increase the capability of the
decoder.

With regard to Claim 3, Wingard in view of Bacon discloses:

The method of Claim 1 (see Claim 1 rejection above)

**Wherein said downloading a computer program code to said CPC further
comprises:**

**Providing a boot code program configured to detect said upgrade decoder;
and if said upgrade decoder is detected, initializing said boot program**
(Bacon – abstract)

With regard to Claim 4, Wingard in view of Bacon discloses:

The method of Claim 1 (see Claim 1 rejection above)

wherein said program is configured to cause said CPC to:

receive said data stream;

transmit said data stream to said upgrade decoder to be decoded;

receive a decoded data stream from said updated decoder. (Bacon –

abstract – Bacon provides motivation to add these features to add signal-

decoding capability)

With regard to Claim 5, Wingard in view of Bacon discloses:

The method of Claim 1 (see Claim 1 rejection above)

Wherein said removable upgrade decoder further comprises:

An interface field programmable gate array (FPGA) configured to interface

with said CPC (This interface choice is not specifically mentioned in the

references, however, Wingard does teach the CPC coupled to the decoder

(paragraph 0060), and the use of a FPGA is known in the art as a common way

to achieve this, therefore it would have been obvious to one of ordinary skill in

the art to couple the devices in this way).

a signal decoder, wherein said signal decoder is configured to increase a

signal decoding capability of said CPC. (Wingard abstract - Wingard provides

motivation to couple a decoder to the tuner to provide for signal decoding

capability)

With regard to Claim 6, Wingard in view of Bacon, discloses:

The method of Claim 5 (see Claim 5 rejection above)

wherein said signal decoder comprises one of an MPEG 4 decoder or a

WM9 decoder (Wingard, Paragraph 0060). Wingard does not specifically

disclose the decoding of a Windows media (WM9) data, however, Wingard

suggests a generic decoder "such as an MPEG decoder, that decodes video,

application, and/or audio). It is well known in the art that Windows Media data

falls into this category.

With regard to Claim 7, Wingard in view of Bacon discloses:

The method of Claim 1 (see Claim 1 rejection above)

further comprising:

receiving a compressed audio/video data stream;

transmit said compressed audio/video data stream to said signal decoder

and;

decoding said compressed audio/video data stream from said signal

decoder. (Wingard, paragraph 0060 – it would have been obvious and expected

that the method that Wingard discloses includes the step of sending the signal to

the decoder to decode it)

5.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wingard

in view of Bacon in further view of "Mensch, US PG PUB # 20020133824 A1".

With regard to Claim 8, Wingard in view of Bacon teaches claim 1, but does not

teach:

further comprising: locally encrypting said compressed audio/video data

stream in said CPC; transmitting said encrypted compressed audio/video

data stream to said removable upgrade decoder; and locally decrypting

said encrypted compressed audio/video data stream in said removable

upgrade decoder.

Mensch discloses in paragraph 0024, that the network disclosed uses

"techniques well-known in the communications art, including encryption and

decryption". Given Mensch's disclosure, it would have been obvious to combine

this feature with the disclosure of Wingard, in view of Bacon, for the purpose of

restricting access to data.

6.   Claims 9-10, 13-15, are rejected under 35 U.S.C. 103(a) as being unpatentable

over "Wingard et al – US PG PUB #2003/0041104" in view of Glabb et al US Patent #

6990203.

        With regard to Claim 9, Wingard discloses: **a tuner** (Wingard, Paragraph

0060) **a demodulator** (although not explicitly disclosed, a demodulator would

have been implied and necessitated in Wingard to receive and demodulate the

signal from the cable provider).

        Wingard fails to explicitly disclose **a first interface field programmable**

gate array (FPGA) communicatively coupled to said demodulator and a first

signal decoder communicatively coupled to said interface field

programmable gate array. However, Official Notice is taken to note that the

concept and advantage of using FPGA to communicatively couple two devices is

notoriously well known and practiced in the art. Therefore, a person of ordinary

skill in the art would have found it obvious in using a FPGA to accomplish the same as claimed.

Wingard fails to teach **wherein said first interface FPGA is configured to be communicatively coupled to removable upgrade decoder, said removable upgrade decoder including a second interface FPGA communicatively coupled to a second signal decoder.** However, Glaab does (column 8, lines 1-3). Glaab discloses here the use of multiple decoders to decode multiple types of signals. It would have been obvious to one of ordinary skill in the art to combine Glaab's teaching of multiple decoders, with Wingard's teachings in order to increase the decoding capability of an Audio/Video system. As described above, using FPGA is a common way in the art to couple devices to communicate with each other.

With regard to claim 10, Wingard in view of Glaab, discloses **the CPC of Claim 9** (see Claim 9 rejection) **wherein said CPC comprises one of a set-top box, a receiver unit, a digital video recorder (DVR), a digital video disk (DVD) player, or an integrated receiver decoder** (Wingard, paragraph 006 – Wingard specifically teaches here that the CPC can be a receiver or decoder, however it is common in the art to integrate DVR and DVD features into set top box units).

With regard to Claim 13, Wingard in view of Glaab, discloses:
The CPC of claim 9 (see claim 9 rejection), **wherein said first interface FPGA is further configured to: locally encrypt audio/video signals prior to**

transmission; and locally decrypt received encrypted audio/video signals.

As stated in claim 9 above, Official Notice is taken that the concept and benefit of

using FPGA to communicatively couple two devices together is notoriously well

known and used in the art. Therefore, one skilled in the art would have found it

obvious to realize the capability of FPGA to encrypt/decrypt signals in order to

protect data transmission from intrusion.

With regard to Claim 14, Wingard in view of Glaab, discloses:

The CPC of claim 9 (see claim 9 rejection)**, wherein said first interface FPGA**

further comprises a hot-plug buffer configured to allow said removable

upgrade decoder to be hot-swapped with said CPC. As stated in claim 9

above, Official Notice is taken that the concept and benefit of using FPGA to

communicatively couple two devices together is notoriously well known and used

in the art. One skilled in the art would have found it obvious to realize the

capability of FPGA to create a hot-plug buffer to allow for plugging/unplugging of

devices.

With regard to Claim 15, Wingard in view of Glaab teaches **the CPC of**

claim 9 (see claim 9 rejection)**, wherein said upgrade decoder is configured**

to decode one of a Moving Picture Group –4 (MPEG-4) data stream or a

Windows Media 9 (WM9) data stream (Wingard suggests a generic decoder

"such as an MPEG decoder, that decodes video, application, and/or audio).

7.   Claims 11-12, 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable

over "Wingard et al, in view of Bacon et al, in further view of Glabb et al.

        With regard to Claim 11, Wingard in view of Bacon teaches substantially

the CPC of claim 9 (see claim 9 rejection), **wherein said first interface FPGA**

is further configured to download a computer program code configured to

enable said CPC to access said upgrade decoder (Bacon discloses the use of

using program code to access the decoder feature, see abstract).

        Therefore, the combined teachings of Wingard and Bacon would have

rendered obvious the above limitations as claimed.

        With regard to Claim 12, Wingard, in view of Bacon, in further view of

Glaab, discloses:

The CPC of claim 11 (see claim 11 rejection), **wherein said first interface**

FPGA is further configured to:

provide a boot code program configured to detect said upgrade decoder;

and if said decoder is detected, initialize said boot code program (As

described above, it is common in the art to use FPGA to communicatively couple

two devices together. Bacon (abstract) discloses the use of using program code

to access the decoder feature)

        With regard to Claim 16, Wingard, in view of Bacon, in further view of

Glaab, discloses:

The CPC of claim 9 (see claim 9 rejection), **further comprising a plurality of**

buffers and filters communicatively coupled to said first signal decoder

(Bacon, Paragraph 11, and paragraph 43 – Bacon discloses that both buffers

and filters are used in his invention. It is obvious to one skilled in the art to use

these devices to temporarily store data and filter desired frequencies).

With regard to Claim 17, Wingard, in view of Bacon, in further view of

Glaab, discloses:

The CPC of claim 9 (see claim 9 rejection) **wherein said upgrade decoder is**

configured to receive a coded stream and decode said coded data stream

into a data format compatible with said first decoder (Bacon – Abstract –

Bacon teaches the coded stream will be decoded into a compatible format with

the decoder device.

8.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Look, in

view of Wingard, in further view of Glaab.

With regard to Claim 21, Look, in View of Wingard, in further view of Glaab

discloses:

The upgrade decoder of Claim 18 (see claim 18 rejection)**, wherein said**

FPGA further comprises:

An encryption/decryption engine configured to locally encrypt and decrypt

audio video signals; and

a hot-plug buffer configured to allow said upgrade decoder to be hot-

swapped with said CPC (see claim 13, 14 rejections).

9.   Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bacon, in view of Look.

With regard to Claim 22, Bacon, in view of Look, discloses:

A processor readable medium having instructions thereon for:

detecting the presence of an upgrade communicatively coupled to a

consumer premise component (CPC);

downloading a program code enabling said CPC to access said upgrade

decoder; and if said upgrade decoder is detected, running said

downloaded program (Bacon, abstract, discloses the use of running program

code to change the decode program, however does not specifically disclose the

use of a separate hardware decoder. Bacon's disclosure teaches that the

multiple decoding capability take place on one piece of hardware. Look, (column

5, lines 35-43) discloses the use of "multiple decoders". It is obvious to one

skilled in the art to combine these two references in order to increase the

decoding capacity of a system, using hardware. Running the software on a

processor readable medium is inherent in both Look and Bacon's disclosures).

With regard to Claim 23, Bacon, in view of Look discloses:

The processor readable medium of claim 22 (see claim 22 rejection), **wherein**

said downloading a program code further comprises:

Downloading a boot program configured to detect said upgrade decoder;

and if said upgrade decoder is detected, initializing said boot code program

(see claim 22 rejection – this claim deals with detecting the upgrade decoder and

accessing it via program code. It is not distinct from claim 22).

With regard to claim 24, Bacon, in view of Look, discloses:

The processor readable medium of claim 22 (see claim 22 rejection), **further**

comprising having instructions thereon for:

passing a received media signal to said upgrade decoder for decoding;

receiving a decoded media signal from said upgrade decoder; and

further processing said decoded media signal through traditional circuitry

in said CPC. (It in inherent in Look's disclosure that the steps of sending and

receiving the media signals to/from the decoder are needed. Further processing

of the signal in also inherent, since the function of Look's device is to produce a

usable output).

10.   Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon,

in view of Look, in further view of Mensch.

      With regard to Claim 25, Bacon, in view of Look, in further view of

Mensch, discloses:

The processor readable medium of claim 24 (see claim 24 rejection), **wherein**

said instructions for passing a received media signal to said upgrade

decoder for decoding further comprises instructions for locally encrypting

said received media signal prior to passing said received media signal to

said upgrade decoder. (See Claim 8 rejection – Mensch discloses the use of

encryption to protect data rights. It is inherent that instructions to encrypt/decrypt

data are present in his disclosure).

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark D. Featherstone whose telephone number is (571) 270-3750. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F US Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571) 272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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